Who's Not Here? (who should be)

(specific people or groups or categories)

Landowner(s), private, non-farm
The national organization (based in New England) that is dedicated to removal/ replacement of lawns with sustainable cover (native plants) *(didn't put name down)*
The Nature Conservancy (Ecoregional Planning Efforts) Doug Sampson
The Conservation Fund
Farmers
City residents
Faith-based environmental groups
Baltimore County Planning Board
BNIP needs to work with the county to include their concerns and indicators
Land developers
Recreational users of forested lands
Society of American Foresters (SAF)
Transportation experts
Watershed organizations
Politicians
Carroll County planning
Harford County planning
Howard County planning

Criterion 1. Conservation of Biological Diversity

Key Issues/Challenges:

- Deer management and geese management (water quality issue; wetlands issue)
- Biological balance – ecosystem processes
- Loss of habitat
- What is the 'proper' mix of land use for preservation programs?
- Fragmentation
- Native diversity vs. total diversity
- Rapid land use and environmental change
- Lack of species inventory, ID rare habitats and species
- Management difficulty because so many 'players'
- Invasive exotics – what and where are key species, loss of native species
- Lack of native understory with afforestation/reforestation
- Maintenance of large, contiguous patches >
- Landscape scale because so fragmented
- What is desirable/achievable in highly altered landscape?
- Patches/no baseline assessment to determine what is achievable?
- Harvests are risky due to seed source/planting can help diversity
- Amenities…need to measure value (e.g., opportunity costs)
- Not using 'green infrastructure' information to determine what/where to protect (e.g., golf course example)
- Good inventory of 'rare' stuff (DNR Natural Heritage Program)
- Impact of pets (e.g., cats) on biodiversity
- Maintain representative "mature" plant/forest communities
- Need for active and continuous management to maintain diversity due to high level of fragmentation (context) and alteration of ecological processes
- Need to consider what will be "native" with the changing landscape (urbanization, climate change, etc.); Need definition of scientific 'non-indigenous species'; What is "invasive"? Now and future?
- Nursery/landscapers sell non-native and invasive species and it is hard to find native species (trees) commercially
- Need to define/determine appropriate methodology to assess biodiversity
  species/patches
- Concentrate on large tracts/older forests
- Educate public on issue and best practices
- Balance biodiversity and property rights
  - Approach it from a regional conservation effort
  - Understand that the definition of biodiversity has to be clarified for each region – our field (envir) tends to approach it from an ethnocentric (regional) perspective
  - Biodiversity – all species are not equal
  - Genetic diversity – we cannot loose the gene pool of endangered species

Report Back

A) Inventory of key indicator species and understanding of ecological functions at the county level.
   - We have migratory birds
   - We have rare, threatened, and endangered species
   - Existing GAP analysis
   - We have some insect data

   We are missing some info. in this area.

B) Impact of native, non-native, domestic (pets and livestock) on ecosystems.

C) Concentrate large blocks of contiguous forest and connections between them.

Criterion 1 Biological Diversity

Key issues:

- Inventory of species
- Impact of non-native, native, domestic species on ecosystems
- Forest fragmentation

Goal: Maintain or increase biological diversity of native forest-"dependent" species in Baltimore County to improve the quality of life.

Indicators:

2) Extent of forest fragmentation
3) Number of rare elements in Baltimore County forests
4) Number of forest 'dependent' species
5) Extent of area by forest type and by age class or successional state
6) Number and extent of non-native organisms in County's forests

Criterion 2. Maintenance of Productive Capacity of Forest Ecosystems

Key Issues/Challenges:

1 Soil erosion
1 Logging in Baltimore
(would help with productivity)
No issue of productivity if
3 The forest cleared (lack of forest land)
3 Need to define management
For long time, forest reserves
For conservation and production uses
4 If forest is not managed to ensure productivity – forest wood lock
1,4 Diversity for regeneration
2,3,4 Forest fragmentation – development issue
1,3 Selective harvesting and timber
3 Losing forest to developers (depends what you start with)
3 Solution – no net loss – opportunity here (system of mitigation)
2 ? Are resource-based economies important to Baltimore County?
2 How to get private owners to manage – don't want regulation, Neighbor problem with harvest
4 Competition of forests and agriculture during development design
3 Planning rural design guidelines contradicted forest maintenance/preservation issues – "Forest are the last thing people think of."
4 Trees do not necessarily relate to a productive forest
2 Private landowners do not fully understand forest benefits – Role of profession forester should play into decisions
1,4 * Lack of regeneration (natural)
1,4 Canopy closure
1,2 Deer exposure
1 Invasive on the edges
2 Valuing ecosystem components
74% is privately owned
4 Terminal harvests not sustainable
1 Invasives – bittersweet, etc.
3 Shifting forest compositions
3 Conversion of productive soils to 'urban/residential' uses
4 Subsidies for resource-based uses – limited market for low-grade trees

- Agriculture vs. Forest productivity – economic benefits
- Tax system does not have incentives for productivity
- Logger training/certification
- Nonlogging productivity of forests
    - Seed source/lack information of benefits in this area (including non-timber forest products)
- Management plan/Civil cultural plan

- Challenge: 'illusion of preservation,' high levels of consumption (wood products) by locals, with wood obtained from unsustainable forest ecosystems – harvest locally – use locally
- What is the mix of wood product industries and how does it match the forest resources of the county, today and in the future?
- Manage pests that affect productive capacity
- Strike a balance in managing forests for products
- Development/education about non-timber forest products (Christmas trees)
- Private landowners should get forester assistance for proper silviculture and regeneration
- Maintain acreage available for forest product management

Note the morning Report Back page for Criterion 2 was missing.

Criterion 2 Productive capacity of forest ecosystems

Key issues:

- Education
- Conversion of land use and land cover to non-forest
- Sustainable management plan

Goal:

- Enhancing and maintaining the capacity of existing forest ecosystems
- Generating new and productive forested areas using sustainable management plans
- Promoting education and awareness of the productive capacity of forest ecosystems

Indicators:

- Area of forest land and net area of forest land available for timber production
- Annual removal of wood products compared to the volume determined to be sustainable
- Total growing stock of both merchantable and non-merchantable tree species on forest land available for timber production
- Area of public forest land with a sustainable management plan and
  Area of private forest land with a sustainable management plan
- Annual removal of non-timber forest compared to the level determined to be sustainable
- Number of acres of timber productive land harvested from natural forest ecosystems vs. tree plantations

Criterion 3. Maintenance of Forest Ecosystem Health and Vitality

Key Issues/Challenges:

USFS – recreation and how it occurs

2 Tree species should be matched to site conditions (streets, parks, etc.)
Improving permeability of land surfaces

1 Management of exotic plant and animal (e.g., earthworms) invasives
Air pollution – atmospheric deposition of nitrogen – shifting soil communities

2 Site preparation
Education of the public about tree ecology
Facilitation of tree regeneration
Noise pollution
Water quality – storm water – 90% – has no storm water management
– surface/groundwater recharge
Health of soils – erosion – compaction
Need to keep the forest in an aggregated phase
Age diversity

2 Species diversity
Change in species in coastal zone

1 Insect infestation – gypsy moth, hemlock wooly adelgid

1 Disease and virus
Fire management
Reuse of woodwaste
Shape and size of forest patches utility design
Education and extension services
Recreational – use
Transportation planning
Developers don't have to put topsoil back after stockpiling it

Do we have assessment of forest conditions – ecosystem health?

2 Do we know what we want to achieve? Define forest health in urban to rural gradient? What is the plan to achieve these goals? Based on reservoir management plans – (17000 acres)
little regeneration/no understory/low diversity
stressors are not being managed

- Does management consider short and long term disturbances?

2 Will we have regeneration after the next major hurricane?

2 Could we re-grow the forest we have now in the future? Do we want to be able to do it?

1 Tendency not to fund IPM programs
How relate forest health to human health (West Nile, Lyme disease)? How does forest condition relate to these?

2 Forest management plans should include forest pest (insect and disease) assessment and recommendations

1 Increase programs to exclude invasives/pests

2 Use appropriate harvest techniques to ensure health following harvest (short and long term)

Report Back

1. Exotic invasive species
   - Diversity
   - Funding
   - Deer

2. Management for ecosystem values
   - Management plans
   - Site prep/Spp matched to conditions
   - Regeneration/maintain forest
   - Disturbance
   - Define in rural and urban

3. Air Quality?
   Ozone?, Nitrogen

4. Expand forest cover
   - Patch size/fragmentation

Criterion 3 Maintenance of forest ecosystem health and vitality

Goal:

I) Invasive/exotic/native species will be managed to limit impacts on sustainability.

Indicators:

1. List of exotic/invasive species
2. Area and percent of forest impacted beyond a [threshold] of damage
3. Monitor spread of invasives/exotics

Goal:

II) Increase implementation of management plans that maintain forest health.

Indicators:

1. Percent (or acres) of forests with a sustainable forest management plan
2. Percent (or acres) of implemented management plans

Goal:

III. Develop and implement a plan for decreasing fragmentation and increasing forested area.

Indicators:

1. Area of forest in County
2. Size of forested patches

Criterion 4. Conservation and Maintenance of Soil and Water Resources

Key Issues/Challenges:

- Protect water quality – heavy metals and organics
- Protect water quantity
- Topsoil protection/retention in agriculture – regeneration
- Wet pond development/irrigation
- Trout fishery – temperature
- Groundwater recharge areas/practice
    - Land use/planning
    - Wellheads and streams
    - Small scale measures (e.g., rain garden)
- Chemical and soil runoff into bay – heavy metals and organics
- Sanitary and storm sewer infrastructure deterioration and invasion by street tree roots (urban forest vs. water infrastructure)
- Sedimenting drinking water reservoir
- Forest debris yields THM precursor in drinking water treatment process
- Forest buffer establishment
- Streambank protection
- Increased runoff from impervious surfaces
- Public education and involvement in above measures
- Nutrient enrichment streams/reservoirs
- Vegetation to use for water infiltration – evaporation
- Urban hydrology
- Rain gardens
- Conservation plans need inspections later to work/BMPs
- Residential fertilizer and pesticide use
- Alternatives to extensive turf cover
- Forest patch size and distribution
- Public education about the role of trees in managing the water cycle
- Point source mitigation on-site treatment
- Commercial/agriculture pesticide use – golf courses
- Education to residents – commercial interests
- BMPs – agriculture, forest, and private lots – developing guidelines, bureaucratic conflict or obstacles
- Provide an inventory of the most ecologically important forest areas and the ecosystem services provided
- Air pollution
- Reforestation and afforestation (additional to riparian)
- Management of invasives vs. water quality protection
- Urban nutrient management – lawns, dogs, etc., native plants, reduce water use
- Stream restoration and restoring forests in cleared abandoned areas to increase water infiltration

- Stormwater retrofit potential in many areas
- Reduction of the "LAWN" mentality
- Forest management prescriptions for soil and water protection
- Altered systems mean hands-off management fails
- Enforcement of erosion control on construction sites is inadequate.
- Train harvesters in erosion and sediment control methods
- Provide temporary stream crossings that minimize long-term impacts
- Design storm drainage systems to utilize stream buffers
- Motivate/encourage landowners to be creative and take direct ownership in developing/using practices
- Actively manage (including harvests) of buffers to ensure functional value in sequestering and transforming dissolved nutrients
- Encourage percolation of stormwater

Report Back

1. Loss of forestland – includes hydrocycle – affects water quality and water quantity
2. Use of forestland water quality, water qualitity and soil
3. Affect of forest/land cover changes on stream stability, quality, and hydrolgic cycle

Potential Goal Language

Drinkable, fishable, swimmable water
All streams provide for desired, beneficial uses
Percent forest land
Restored stream/decrease in unstable streams
Stream buffers
Protect and increase recharge areas
Soils – "A" Horizon, organic layer
Meeting all TMDL's

Brainstormed Indicators (This group started with MP Indicators. The numbers with the hatchmark (#18, #19b) refer to the MP indicator number. The actual text has been included below in parentheses for clarity.)

#18 (Area and percent of forest land with significant soil erosion.) – OK but low priority in this area
#19 (Area and percent of forest land managed primarily for protective functions, e.g. watersheds, flood protection, avalanche protection, riparian zones.) *(Group wrote in those below although they don't seem to relate to actual text.)*

10 #19b – Percent of forest land protected through permanent means, easements, etc.

7 #19c – Percent of streams protected by riparian buffers/miles restored
6 #19d – Percent of forest land in watershed/County/etc.
2 #20 (Percent of stream kilometers in forested catchments in which stream flow and timing has significantly deviated from the historic range of variation.) – Redefine in terms of mixed land use, > Percent of County stream miles that deviate from historic flow and timing
1 Percent imperviousness (could be used with other indicators)
#21-22 (Area and percent of forest land with significantly diminished soil organic matter and/or changes in other soil chemical properties.; Area and percent of forest land with significant compaction or change in soil physical properties resulting from human activities.) – Not applicable for Baltimore County
6 #23 (Percent of water bodies in forest areas (e.g. stream kilometers, lake hectares) with significant variance of biological diversity from the historic range of variability.) – + Percent of stream miles/waters meeting good IBI
#24 (Percent of water bodies in forest areas (e.g. stream kilometers, lake hectares) with significant variation from the historic range of variability in pH, dissolved oxygen, levels of chemicals, electrical conductivity, sedimentation or temperature change.) – OK
#25 (Area and percent of forest land experiencing an accumulation of persistent toxic substances.) – OK
5 Percent of streams supporting trout populations (or other natural species measure)
2 Miles of unstable streams/unstable streams restored
3 Acres of potential recharge areas in forest or functioning

Criterion 4 Soil and water resources

Key issues:

- Loss of forest land affecting water quality, quantity, and stream function
- Maintaining and increasing forest in key sensitive areas (buffer, recharge, reservoirs)

Goal: Manage Baltimore County Forest for protection and improvement of soil and water resources

Indicators:

- Percent of forest land under permanent protection (through easements, etc.)
- Percent of streams (miles) protected by forest buffers/miles restored
- Percent of forest land by watershed
- Percent of stream miles/waters meeting "good" IBI – Index of Biological Integrity
- Percent of streams supporting trout populations (or some measure of percent natural species)
- Acres of potential recharge areas in forest cover
- Percent/miles of unstable streams (deviate from historic or stable flow and timing)

Criterion 5. Maintenance of Forest Contribution to Global Carbon Cycles

Key Issues/Challenges:

- May conflict with other indicators
- Use the forest, harvest into long-term products
- * Challenge: Knowledge at local level of decision making
- * Reduce carbon dioxide at source
- Education and awareness of forestry assistance
- Carbon trading – provide incentives
- Landowners need to find out how to increase carbon storage on their land
- National pollution affects local air quality and need more forests to filter pollution
- * Need to establish goals for carbon at different scales/based on research on forest practices vs. releases
- Some forest product uses release more carbon than others (using wood for energy "releases" carbon dioxide/using wood for furniture "stores" carbon dioxide)
- * Don't know how Baltimore County balances in terms of carbon dioxide release vs. storage capacity
    - Forest types
    - Amount of forest
- Encourage use of ethanol
- * Maintain growth rates through management
- * Maintain or <u>increase</u> forest cover – especially in urban areas – no net loss (FCA)
- Balance of output and sequestration
- Utilizing species that are appropriate to sequestration and biological diversity for balance
- Establishing economic values for nature's services and costs associated with poor BMPs (Best Management Practices)
- Challenge > How can collaboration happen at county level when "carbon trading" at the national/global level?
- Atmospheric nitrogen loadings shifts C/N ratio of soils…affecting forest health

* Difficulty of integrating local management for carbon sequestration with national level management and policies

- No systematic inventory

- Link people to their carbon addiction
- Consideration of reforestation for objectives other than harvests/biodiversity, i.e., for carbon sequestration (in urban areas – parking areas, etc.)
- Develop balance at county level of carbon dioxide produced vs. sequestration
- Fees-in-lieu-of-mitigation fund community/urban reforestation (unique!) – great 'partnership' with developers
- No county funds for reforestation that is not mitigation
- State open space program has helped county/effective in forested state parks

Report Back

Inventory

1) We don't know what the C balances are in Baltimore County: fluxes and storage
   - Vegetation (residential, agriculture, forest)

Goals Needed

2) What are our goals at different scales?
   Watershed?
   Eco-region?
   Neighborhood?
   Global?

3) How do we get there?
   - Land management
     - Public
     - Private
   - Carbon trading
   - Other indirect methods
     - No net loss
     - Reforestation

Criterion 5 Global carbon cycle

Key issues:

- Lack of inventory/information on present condition
- $$ for acquisition and management
- Inability to respond to existing market demand due to lack of resources/infrastructure

Goal: Increase opportunities for participation in carbon markets

Indicators:

- Quantity and quality of ecosystem and carbon pool, by forest type, age, class, successional stage, land use, physio region
- $$ expended buying credits (acquisition and maintenance)
- Number of acres afforested and reforested under program
- Number and geographic location of buyers and sellers of credits

Criterion 6. Maintenance and Enhancement of Long-term Multiple Socioeconomic Benefits to Meet Needs of Societies

Key Issues/Challenges:

1. Providing for long term recreation demands
2. Active management for specified uses – social acceptance, ability to perform
3. Protection of water supply
4. Identification of socioeconomic benefits
5. Public "benefits" of private forests – "Who pays"
6. Society undervalues contribution of forests to regional quality/benefits – e.g., air/water quality
7. Relationship to quality of life in county
8. Landowner objectives not known or they do not understand management issues – "People buy space"
9. List socioeconomic benefits for our county
10. Prioritize benefits – landscape benefits from fragmented ownerships
11. Lack of understanding of landowner values by manager
12. Challenge: long-term changes in population size AND AFFLUENCE
13. Link between zoning and "forest," but what about different types of forest
14. Aesthetics
15. How do you get landowners to manage their land? Do they need to manage? Yes!
16. Link between benefits, constituencies, and management?
17. Property rights
    - Rights to manage land they want
    - Rights to pollute other people's health and quality of life
18. Balance between county, state, and larger scale benefits and costs
19. Pressure on county to extend water and sewer and increase open land/forest available for development
20. Fragmentation, small parcels, more parcels
21. Profit versus stewardship ethic (long-term commitment to the land) (changing social dynamic)
22. Social/economic/environmental scientist (and those in building industry) don't interact so policy not comprehensive
23. Forest-related industry employment
24. Heightened awareness of forested areas (parks, forests) benefits
25. * Change preservation mentality to conservation mentality
26. Ecosystem management of publicly held and easement
27. Privately held – noting that there is a diversity and overlap
28. Creating a local market for forest products and non-forest products including a non traditional acknowledgement of green infrastructure contribution to the ecosystem
29. Building codes to provide tax credits to encourage using local forest products
30. Hunting
31. Are resource-based economies necessary to help keep private lands forested?
32. Need innovative incentives to encourage restoring ecological function
33. Identify core forest habitat areas

○ 34. Balance ecological and economic values of forest
Identify both ecologically valuable and economically valuable forests
□ 35. Loss of revenue from lack of management on public land

Report Back

○ ⇨ 1) Iden. of values/benefits > priorities for county and public awareness
e.g., water quality
recreation
air quality
quality of life
aesthetics

△ ⇨ 4) Private landowner education/objectives – diversity and overlap
Includes profit vs. stewardship ethic, private property rights, employment

□ ⇨ 3) "Who pays?"
(e.g., public benefits of private forests, revenues, city/county scale/relationship, incentives (e.g., easements, forestry stewardship plans, market for local products, tax codes/incentives)

◊ ⇨ 2) Societal/public issues
Coordination among owners/managers
Population growth, zoning, development pressure, fragmentation, preservation/conservation, "green infrastructure"

Criterion 6 Long term multiple socio-economic benefits

Key issues:

- Timber harvest is not a major economic factor in Baltimore County but management, including cutting, may be important for forest health

Goal: Expand forest land base and manage for: recreation, forest health, aesthetic, and water supply purposes, with minor income/revenue enhancement from selective cutting.

Indicators:

- $ value of forest setting for residences
- Economic value of protected water supply
- $ value of selective cuts on managed forests
- Area and percent of forest land managed for recreation, as percent of total forest
- Area (total acres) maintained for residential aesthetic values
- Local budget for forest assessment, inventory, research, planning, regulation and education.

Criterion 7. Legal, Institutional and Economic Framework for Forest Conservation and Sustainable Management

Key Issues/Challenges:

1. Who owns/is responsible for forests during and after community development
   Institutional confusion
2. When County buys forest land, don't manage it, Preservation vs. use and management – √√√√√
3. Deer problems – no hunting allowed
4. There is a strong institutional structure in the County – this is an asset.
5. Duplication of roles, DNR, NRCS, forestry boards, S&W districts, etc. – MDE – effective program integration
6. Conflicting responsibilities – who's responsible for what – isn't clear to landowners – turf?!
7. Inadequate communication
8. Restrictions on use of land set aside for reservoirs – conflicts for future visions
9. Urban-rural demarcation line and metropolitan district – issue re: deer management, deer hunting – √√
10. Gradient from Baltimore City to rural Baltimore – landscape each with different views, needs, and structures for financing and using benefits
11. Laws we currently have may not represent the tools needed for landscape and long term options
12. Funding issues for landowned, purchase, etc.
13. Existing government and institutional framework is based on an outdated/changing paradigm of ownership patterns
14. Do ecological priorities match the institutional mechanisms?
15. Does staffing of public agencies match the demographic needs of County? – √
16. Issues of agencies developed for large scale reclamation and now this is not relevant
17. Current Forest Conservation Act puts value on bottomland and riparian area. Forests and upland forest, including large patches, are disappearing. – √√√√√
18. Wildlife habitat needs to be considered as a higher priority under Forest Conservation Act
19. Different government/private entities manage contiguous forest areas differently – fragments the efforts and may put energy or not put energy into what really matters
20. Conflicting economic drivers and goals affect use of forestland
21. Need value placed on urban forest – √
22. Re-evaluation of Tax Incentive Program for forest land owners – √√√√√
    Manage the properties, don't just let them sit unmanaged
23. Encouraging ethnic, class diversity to participate in policy making – √
    Make sure there is still a DMR after budget cuts in two years
24. Forest incentives that is equal to agriculture incentives
25. Ecological health means economic wealth
26. Zoning and land use regulations
27. Comprehensive policy guidelines
28. Fees in lieu of mitigation from developers > community reforestation program
29. Make a role for county forestry boards

30. Baltimore County needs to include or facilitate all regions in a planning process
31. Government institutions are incremental and reactionary, but conservation is long term and continuous
32. Who is the proper institution to lead or manage this process?
33. Need strong political leadership to tackle major land use change that is focused on increased ecological function – √
34. Is current economic system compatible with sustainable forest management? budget? – √√√√
35. After the county completes building it "hard scape" or "build out" will there be an opportunity to focus on forest ecosystems?

Report Back

#1 Public and private ability and willingness to manage forest lands and open space
Challenge:
- funding and providing incentives
- reconcile different values

#2 Current policy protections exist for riparian and bottomland forests, but much less protection for upland forests
Challenge:
- need policies that address issues other than water quality

#3 Capacity ($ and people-expertise) for planning, regulating, assessing forest lands

#4 Existing government and institutional framework is based on an outdated/changing paradigm of ownership patterns.
- time frame
- what are the incentives (economic vs. other)
- public perception of what forest management is including diverse groups (ethnic and class)

Goals Brainstorming
- Change institutional frameworks that values ecosystem
- Change social paradigms – build public support – education
- Trade or create a market for conservation credits
- What kind of laws in place in Baltimore County?
- Review policies that are in place – what is working and not working
- Retrofit of built environment
- Incentives – reduction of taxes

1. Increase the amount of sustainable managed forest in priority areas to equal 50% of the total land area of the Baltimore County
2. Laws, regulations, and policies in place to protect sustainable forest and increase (Group 7 goal)
3. Amount of resources to implement sustainable management
4. Develop incentives

Mission
Increase the amount of sustainably managed forest in priority areas to equal 50% of the total land area in Baltimore County

Goals
1. Establish laws, regulations, policies and incentives to value, protect and increase sustainable forest

Indicators
I. Sustainable retrofits of the built environment
   The amount of funding for sustainable forest compared to Y2K
2. Number of schools that include sustainable forest in their curriculum
3. Percent of forest in relationship protected and sustainable forest to Y2K
4. Number of Baltimore county and state agencies that include an objective on sustainable forest
5. Number of acres covered by forest tax code
   New tax cut
6.
7. Track incentives both economical and social
8. Number of institutions and organization (collaborations)
9. Track developers and architects are include sustainable elements

Criterion 7 Legal, institutional, economic framework

Key issues:
- Public and private ability and willingness to manage forest lands
- Protection for upland forest
- Capacity for planning, regulating and assessing forest
- Paradigm shift

Goal: Establish laws, regulations, policies and incentives to value, protect and increase sustainable forest.

Indicators:
- Percent of forest that is protected and sustainable compared to Y2K
- Number of sustainable new builds and retrofits
- Number of schools that include sustainable forest in their curriculum
- Amount of funding sustainable forest compared to Y2K
- Number of Baltimore county and state agencies which include sustainable forest objective
- Number of acres covered by a new tax code
- Number of developers and architects building sustainable buildings
- Number of economic and social incentives focus on sustainable forest

<u>What else?</u> What issues or concerns didn't fit into one of the seven criteria?

A
- Who pays?
- Who will lead?
- You cannot consider forests alone; other resource disciplines and professions, like agriculture and developers, need to be part of this process
- It depends on who is not here today. What about agriculture advocates? Other interest groups?

D
- Human population trends, human migration patterns
- <u>Politicians</u> and decision makers need to be part of this discussion elected officials

B
- How personal property rights fit into all these issues?
- Long term process → forests take a long time to grow, personal and society rules will change over time → evolution → adaptive management

B
- <u>Individual</u> decisions will have an impact at the local level. Education is an important component of this discussion!

D
- City/County boundary (look at maps)

B
- Local people need to have access to data from relevant NGOs and/or public entities

B
- Better training and coordination of tree steward

D
- The City of Baltimore needs to sell its reservoir land to the County management

A
- Where the incentive for cities to manage their land

A
- Revenue sources to manage or sustain ecosystem management

C
- Enforcement of BMPs

C
- County's lack of ability to enforce regulations – (stream buffers/construction easements/)

B
- Divergent opinions about forest values and benefits

B
- Public perception and apathy

D
- Government decisions being made for political reasons instead of ecological reasons (fear of making controversial decisions)

#
- Landownership has fragmented parcels into increasingly smaller pieces; management will require a shift in wood products industry to smaller operations, more site sensitive equipment (low impact) and appreciation for the aesthetic values by foresters and timber operators

C
- Residential and commercial development patterns

D
- Ability to set goals and manage on regional, county/city, and local scales

A
- DNR Forest Service has lost >50% of field staff in the past 10 years

B
- Politics – political motivation and dedication to take on complex technical and social value issues

A
- Public good vs. private sector balance – don't jeopardize constitution
- Research needs?

Report Back

A. "Financing" Sustainable Forests – who benefits, who pays and measuring values to establish incentives
B. Education and Decision-making for "Stewardship"
C. Regulatory authority and enforcement within an ecosystem management framework
D. Linkage of process, information, measures and decisions across political boundaries and landscape scales